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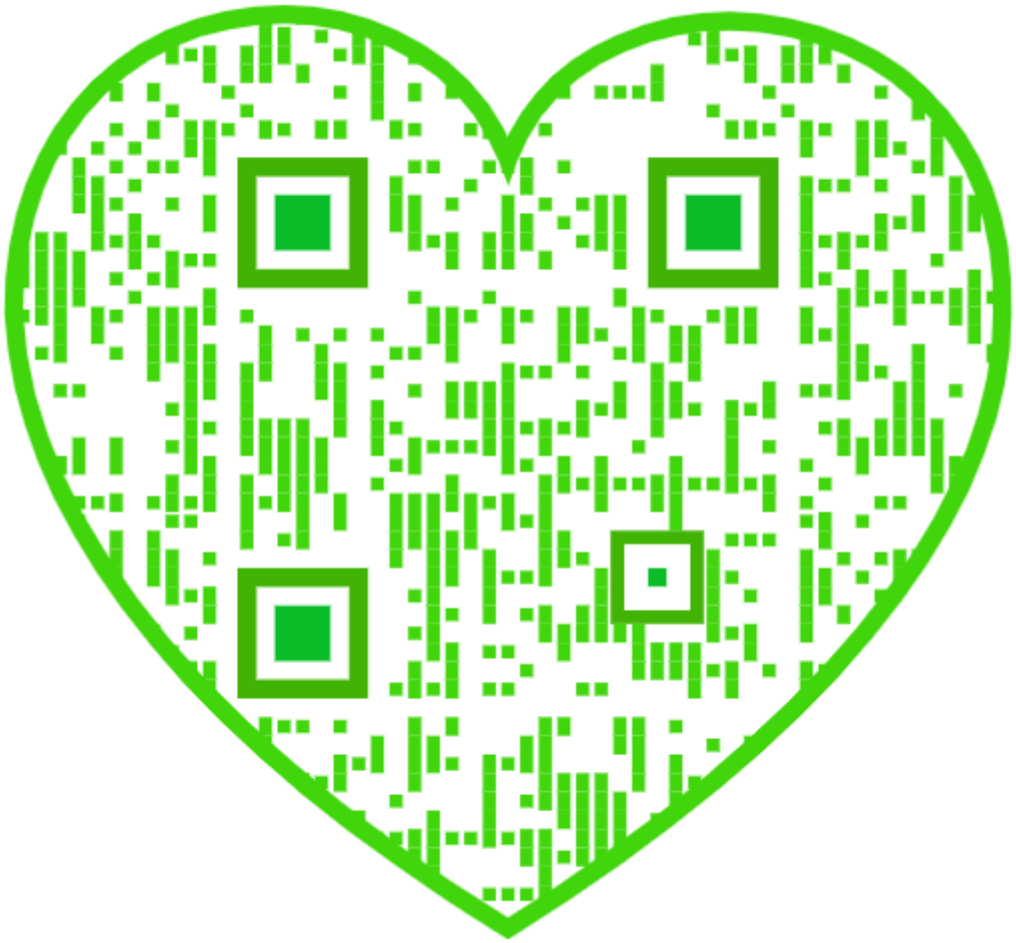

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A DEVICE FOR COUNTING YOUNG FISH

By Robert K. Robinson

Superintendent U. S. Fisheries Station, White Sulphur Springs, W. Va.

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A DEVICE FOR COUNTING YOUNG FISH.

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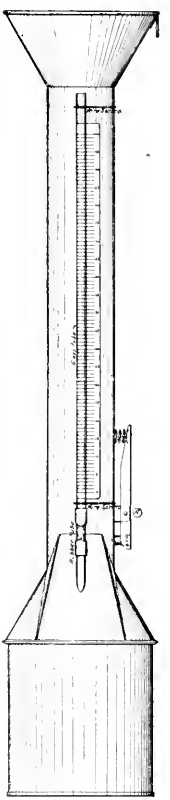
This device is intended as a means of measuring or counting young fish of a size from the fry stage up to the length of $1\frac{1}{4}$ inches. The instrument is made of thin brass, nickel plated, and weighs about 1 pound. The cylindrical base is 4 inches in diameter and 4 inches high, with a top or neck which tapers to a diameter of $1\frac{1}{2}$ inches, at which point is joined an upright tube of this diameter and 15 inches long. The tube is enlarged at its upper end to form a funnel mouth. Immediately above the base, upon the sloping neck, is fastened a small metal tube, and to this is attached, by means of a short piece of small rubber tubing, a glass tube $\frac{3}{8}$ inch in diameter which extends up to the base of the funnel at the top and is held in place by wire clamps. Behind the glass tube, on the main tube of the apparatus, is engraved a 10-inch scale, graduated 10 points to the inch, beginning at zero at the bottom, and each fifth point above numbered consecutively to the top, or to 100 points. The lower end of the small metal tube is set in a shield of metal, which is soldered to the sloping neck of the base of the vessel, this covered area of the latter being perforated to permit the entrance of water into the small tube while screening out the fish. Immediately below the zero point, and to the side of the scale, there is a small vent or valve, which is controlled by a spring lever and serves conveniently to adjust the water level in the apparatus to the zero point on the scale. The mode of using the apparatus may be understood by the following directions:



Measure by means of which to count young fish.

Fill the measure with water until the latter appears in the glass tube slightly above the zero point on the scale. By pressing the upper end of the valve lever the water may be allowed to escape and thus be easily adjusted to the zero point.

Count out from any given lot of fish to be measured 300 to 500 of average size. Put the counted fish into the measure as free of water as possible; this may be done by putting them into a quart graduate and, holding a small hand net tightly over the top of the graduate, draining the water off quickly by inverting the graduate. A perforated dipper may serve in place of the hand net.

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The displacement made by the counted fish will be shown by a rise of water in the glass tube above the zero point; then by reading the number of points to which the water rises the average number of fish per point may be easily ascertained. To find the number of fish in an entire given lot, empty the measure, replace the water to the zero point, put the fish in by the operation above described, again read the number of points above zero, then multiply the latter by the number of fish per point, previously ascertained.

The measure should be held perpendicular, which may be accomplished by suspending it between the thumb and index finger placed at the base of the funnel.

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